

**REMARKS**

Applicants have carefully considered this Application in connection with the Examiner's Action, and respectfully request reconsideration of this Application in view of the above Amendment and the following remarks:

Pending in this Application are Claims 1-55.

**I. Amendments to Claims:**

In accordance with the Examiner suggestions, the Applicants have amended a phrase in Claim 1, line 5 from "a alkane" to "an alkane." The examiner has also objected to method Claims 32-52 improperly depending on article of manufacture Claim 30. This improper dependency has been corrected, as shown by the amended method Claims 32-52 that now correctly depend upon method Claim 31.

**II. Rejections Under 35 U.S.C. §112, Second Paragraph**

(1) Claims 1-23, 25-28, and 39-42 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as the invention. In light of the amended claims and the following comments, Applicants respectfully request that these rejections be withdrawn.

The Examiner asserts that Claims 1-23 and 25-28 are readable on "an aromatic redox compound" with no further clarification. Additionally the Examiner requested clarification as to what constitutes an aromatic redox compound that falls within the scope of the invention. As stated on page 12, lines 10-15 in the specification:

“The aromatic redox compound includes any substituted or unsubstituted benzoquinone, naphthoquinone, or anthroquinone. The preferred aromatic redox compound includes benzoquinone, methyl-benzoquinone, naphthoquinone, and methyl-naphthoquinone. The most preferred aromatic redox compound includes substituted or unsubstituted benzoquinone and naphthoquinone.”

(2) The Examiner has pointed out that in Claims 8-9 and 37-38, the term “the isoprenoid” lacks antecedent basis. This issues due to improper claim dependency and has been addressed in amended Claims 8-9 and 37-38, wherein proper antecedent basis for the term “the isoprenoid” now stands corrected.

(3) The Examiner has pointed out that the meaning of the terms “fixed oil-, ester-, fatty acid-, or ether- containing olefin” are unclear in Claims 10 and 39. Each of the terms fixed oil-, ester-, fatty acid-, or ether- have their common meaning. Because alkenes are commonly known as olefins, the applicants agree that using these two synonyms in the same claim may lead to confusion. The amended Claim 10 and the amended Claim 39 have address this ambiguity.

(4) The Examiner has pointed out that the phrase “the oxygen-containing oxidizing agent” lacks antecedent basis in Claims 11, 12, 40, and 41. This phrase has been replaced with “the mixture of ozone and oxygen,” which has a proper antecedent basis from Claim 1 and Claim 31.

(5) The Examiner has pointed out that the meaning of the terms “electroporation pulse, phonon, plasma pulse, gravitational pulse and continuous flow excitation are unclear in Claims 20-21 with respect to activation a dye such as a porphyrin or rose bengal. The terms

“gravitational pulse,” “electroporation pulse,” “plasma pulse,” “phonon,” and “continuous flow excitation” have been removed from Amended Claims 20-21.

(6) The term “plasma” in Claims 27 and 42 have been removed from Amended Claims 27 and 42.

### **III. Rejections Under 35 U.S.C. §112, First Paragraph**

The Examiner has rejected Claims 1-55 under 35 U.S.C. §112, first paragraph, citing:

....that although the specification was enabling for “the specific compositional ingredients and percentages shown on pages 15 and 16 (Examples 3A and 3B), it does not reasonably provide enablement for the more broadly claimed subject matter, including those without specific percentages for components. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.”

In contrast with the Examiners reasoning, in *Clinical Products Ltd vs. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.C. 1966), the Court held that:

“The main difficulty with broad claims is not that the claim is so broad as to be indefinite, like infinity, but that such a broad claim is quite likely to be either anticipated under 35 U.S.C. §102 or rendered obvious under 35 U.S.C. §103.”

Although the Examiner concedes that “the relative skill of those in this art is quite high,” the Examiner has not provided specific or broad prior art examples that describe the instant invention as being anticipated under 35 U.S.C. §102 or rendered obvious under 35 U.S.C. §103. Examples 1 - 4 in the application would allow one of ordinary skill in the art to enable the instant

invention **without undue experimentation**. In fact, the Examiner has stated that the instant invention has been enabled in at least one example described in the Applicants specification (Examples 3A and 3B), but the Examiner maintains that the specification “does not reasonably provide enablement for the more broadly claimed subject matter, including those without specific percentages for components.” However, in *In re Goffe*, 542 F.2d 564, 191 U.S.P.Q. 429, 4341 (C.C.P.A. 1976), the Court held that:

“To provide effective incentives, claims must adequately protect inventors. To demand that the first to disclose shall limit his claims to what he has found will work or to materials that meet the guidelines specified for “preferred” materials in a process would not serve the constitutional purpose of promoting progress in the useful arts.”

Besides, in *In re Geerdes*, 491 F. 2d. 1260, 180 U.S.P.Q. 789, 793 (9C.C.P.A. 1974), the Court held that:

“That experimentation may be involved with the selection of proportions and particle sizes is not determinative of the question of scope of enablement; it is only undue experimentation that is fatal.”

Likewise, in *In re Morehouse and Bolton*, 545 F. 2d 162, 192 U.S.P.Q. 29, 32 (C.C.P.A. 1976), the Court held that:

“The PTO has the burden of giving reasons, supported by the record as a whole, why the specification is not enabling, and showing that the disclosure entails undue experimentation would be one way of meeting that burden.”

The Examiner provided two articles published in Chemical Abstracts to “show the unpredictable functions and interactions that occur when peroxides and/or dyes are administered.” However,

neither of these publications provide support to the Examiners assertion of undue experimentation would be required to produce an article of manufacture comprising the elements in the first and second containers disclosed in Claims 1-30, consequently these claims were rejected for unpredictability based upon the two cited articles. For example, Chemical Abstracts 125:9418 concludes that high linoleic acid intake is associated with increased oxidation and susceptibility of atherogenic lipoproteins in men. In another example, Chemical Abstracts 105:223647 concludes that the relaxation of aortic rings that were first artificially contracted with PGF<sub>2</sub> is a general property of peroxides, and the endothelium may in some instances facilitate this relaxation. In regards to Claims 31-55, the Examiner also used the same two cited Chemical Abstract articles to show the unpredictability of the art in providing treatments for coronary disease with peroxides or oxidative products of alkenes is very high. The Applicants respectfully remind the Examiner that in *In re Angstadt and Griffin*, 537 F.2d 498, 190 U.S.P.Q. 214, 218 (C.C.P.A. 1976) the Court held that:

“In an unpredictable art, does 35 U.S.C. 112 require disclosure of a test with every species covered by a claim? To require such a complete disclosure would apparently necessitate a patent application with thousands of examples or a disclosure with thousands of catalysts along with information as to whether each exhibits catalytic behavior resulting in the production of the desired products. More importantly, such a requirement would force an inventor seeking adequate patent protection to carry out a prohibitive number of actual experiments. This would tend to discourage inventors from filing patent applications in an unpredictable area since the patent claims would have to be limited to those embodiments that are expressly disclosed. A potential infringer could readily avoid “literal” infringement of such claims by merely finding another analogous catalyst complex that could be used in forming the same products.”

Then, the same Court held that:

“The term experimentation implies that the success of the particular activity is uncertain. The basic policy of the Patent Act is to encourage disclosure of inventions and thereby to promote progress in the useful arts. To require disclosures in patent applications to transcend the level of knowledge of those skilled in the art would stifle the disclosure of inventions in fields we understand imperfectly, like catalytic chemistry. The certainty that the law requires in patents is not greater than is reasonable, having regard for their subject matter.”

Additionally, in *Hugh W. Batcheller vs. Henry Cole Co.*, 7F. Supp. 898, 22 U.S.P.Q. 354, 358 (Mass. 1934), the Court held that:

“A mere change in proportion involves only mechanical skill and does not amount to invention, nor is it invention to adopt different materials in the construction of a device.”

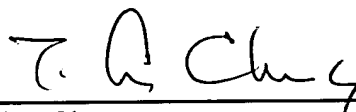
For all of the above reasons, the Applicants respectfully assert that Claims 1-55 under 35 U.S.C. §112, first paragraph, reasonably provide enablement any person skilled in the art for the more broadly claimed subject matter, including those without specific percentages for components and without undue experimentation.

**IV. Conclusion**

Applicants respectfully submit that, in light of the foregoing Amendments and comments, Claims 1-55 are in condition for allowance. A Notice of Allowance is therefore requested.

If the Examiner has any other matters which pertain to this Application, the Examiner is encouraged to contact the undersigned to resolve these matters by Examiner's Amendment where possible.

Respectfully submitted,



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